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Identifying Military and Combat-Specific Risk Factors for Child Adjustment: Comparing High and Low Risk Military Families and Civilian Families

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14. ABSTRACT

Parental deployment can disrupt the care children receive both as a result of deployment-related separation and the potentially destabilizing impact of deployment on the remaining caregiver and daily routines. The project entails the assessment of parents (N=200) whose spouse/partner is currently in a "low perceived risk" deployment and has a child between the age of 3 and 7 and comparison groups of civilain single parent families (N=200) and civilian dual parent families (N=200). The objectives of this study are to: 1) identify and measure developmentally salient skills that are indicators of current adaptation among preschool and early childhood boys and girls of civilian intact and single-parent families. This will allow for the identification of military-specific challenges, if any, of child adjustment and developmental milestones, and; 2) examine the role of spousal-perceived Service Member risk on caregiver behaviors associated with parental deployment in the prediction of child adaptation. Specifically, we aimed to determine the role of Spouse's ratings of partner risk during deployment predicting child adjustment by surveying families deployed in support brigades. We found evidence of military-specific maternal parent and child emotional health issues as compared to both single and dual parent civilian families. Importantly, maternal parents who engaged in family readiness resources were able to mitigate some of these effects.

15. SUBJECT TERMS
Spouse Child Family Adjustment Combat Deployment

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INTRODUCTION

There is an emerging consensus that parental combat deployment may increase risk for child development; but details on what the remaining parent can do to reduce the risk remain unclear. The current proposal provides information on which children are at greatest risk and on the circumstances that contribute to that risk as a result of parental combat deployment. The objectives of this study are to: 1) identify and measure developmentally salient skills that are indicators of current adaptation among preschool and early childhood boys and girls of civilian intact and single-parent families. This will allow for the identification of military-specific challenges, if any, of child adjustment and developmental milestones, and; 2) examine the role of spousal-perceived Service Member risk on caregiver behaviors associated with parental deployment in the prediction of child adaptation. The intended scope of this award is to compliment our Hypothesis Development Award in which we collected data from a sample of spouses and partners (n=400) of Service Members from Fort Drum, NY, deployed to Iraq or Afghanistan who have a child age 3-7. Specifically, the aims of current award include collecting surveys from: 1) 200 spouses and partners of Service Members with "low perceived risk" deployments; 2) 200 single-parent civilian families, and; 3) 200 dual-parent "intact" civilian families.

KEYWORDS

Spouse Child Family Adjustment Combat Deployment

ACCOMPLISHMENTS

Project Major Goals

1) Identify and measure developmentally salient skills that are indicators of current adaptation among preschool and early childhood boys and girls of civilian intact and single-parent families.

2) Examine the role of spousal-perceived Service Member risk on caregiver behaviors associated with parental deployment in the prediction of child adaptation.

Key Outcomes

Method

An on-line survey was disseminated to 200 military families in addition to 200 civilian single-parent and dual-parent "intact" families for completion via SnapSurvey software. Military families were recruited as a sample of convenience by social media specifcally targeted for active duty Army families. Single parent families were recruited by social media specifcally targeted for civilian single parents, with potential respondents yoked by child age, gender, parent age, and familiy socio-economic status. Dual-parent families were recruited via local school districts that had been selected based on the demographic makeup of our military sample. By the specifics of the award mechanism, data collection needed to be anonymized. Therefore, online consent was obtained by computer information sheet. Participants were reimbursed with a $50 gift card for their time.

Measures

The on-line survey contained questionnaires pertaining to parent and child functioning in a variety of domains, as well as non-identifying demographic information, including:

I. Adult measures.

a. Parenting Issues:

i. Parent-child relationship quality: the 29-item Parent Child Relationship Questionnaire (PCRQ; Furman & Adler, 2001).

ii. Distress in the parenting role: the 36-item Parenting Stress Index- Short Form (PSI-SF; Abidin, 1995).

b. Maternal Emotional Health:

i. Emotion regulation: the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004).

ii. Depression symptoms: the 20-item CES-D (Radloff, 1977) self- report questionnaire.

iii. Maternal perception of spousal risk: We created a 6-point Likert item asking military spouses to rate the perceived risk their husband was taking during the current deployment, with 1= no/low risk and 6 = high risk.

II. Child measures.

a. Emotional and Behavioral Problems: the 113-item caregiver rated Child Behavioral Checklist (CBCL; Achenbach & Edelbrock, 1983). Ratings on this measure assess both clinical and sub-clinical levels of psychopathology across internalizing and externalizing disorders.

b. Developmental Skill Achievement:

i. Preschool Aged children

1. Self regulation: the 36-item Early Childhood Behavior Questionnaire – Very Short Form (CBQ-VSF; Putnam & Rothbart, 2006) assesses children's developing self regulation. The CBQ-VSF assesses three domains (i.e. negative affectivity, surgency, and effortful control) that are thought to reflect children's reactivity and ability to engage in skills related to self regulation.

2. Emotion regulation: Children's ability to regulate their emotions is measured using the 24-item EmotionRegulation Checklist (Shields & Cicchetti, 1997, 2001), which assesses parents' perceptions of the child's emotionality and regulation, including emotional understanding, empathy, and dysregulation of both positive and negative emotions.

3. Social skills: Preschoolers' development of social skills within the peer context is assessed using the parent rated 49-item Social Skills Rating System (Gresham & Elliot, 1990) which captures children's level of cooperation, assertiveness, and prosociability in interaction with peers.

ii. Early School age children

1. Friendship formation: During the early school years,children not only must engage in prosocial behavior, but they must also begin to focus on social acceptance and friendship formation. Parent's complete a 14-item questionnaire adapted from Lansford, Putallaz, Grimes, Schiro-Osman, Kupersmidt, & Coie's (2006) project designed to assess social acceptance, popularity, friendship formation, and friendship quality among early school age children.

2. School performance: school adjustment and performance is assessed using a 19-item questionnaire.

III. Environmental Factors

a. Stress endured by the family and the child: the 10-item Life Events Scale (LES; Kanner, Feldman, Weinberger, & Ford, 1987).

b. Community support: Spouses completed a questionnaire about their use of the Battlemind program, a military sanctioned program designed to prepare families for the stresses of deployment.

c. Social support: the 40-item Interpersonal Support Evaluation List (ISEL; Cohen & Hobermen, 1983).

Findings

Demographics

As seen in Table 1A, we were able to yoke our preschool age (ages 3-4) and school age (ages 5 – 7) civilain samples to our military samples on a variety of demographic characteristics, including parent ages and child race. For both the preschool and school age samples, the needs-to-income ratio was statistically lower in the single parent civilian sample relative to both the high perceived risk military- and dual parent civilain samples, $F(2,371) = 5.42$, $p < 0.001$, post hoc comparisons $p < 0.05$ and $F(2,576) = 9.44$, $p< 0.0001$, post hoc comparisons $p <0.05$, respectively (See Table 1B). In addition, the length of deployment, number of deployments, age of child at first deployment, and total number of months separated from father were selected yoked to match the data from the 400 participating families in our hypothesis development award.

Research Questions

To address our aims, a series of univariate ANOVAs were used to examine potential mean level differences in indicators of maternal emotional health (i.e. maternal depressive symptoms and emotion regulation), parenting distress, child internalizing, and externalizing symptoms. As seen in Table 2, mean level differences between groups were found for each of these indictors of well-being. Mothers of military families endorsed significantly more depressive symptoms then either single mothers or mothers in two parent families, rated themselves as less emotionally regulated and more stressed by parenting than mothers of two parent families. Single mothers also indicated that they had more depressive symptoms and were more stressed by parenting then mothers in two parent families. Children from military families demonstrated more internalizing and externalizing symptoms then either the single or two parent families. In addition, children from single parent families exhibited more internalizing and externalizing symptoms than children within two parent families.

Next a series of nested model comparisons in structured equation modelling (SEM) were used to determine if the associations between maternal emotional health and parenting stress and ratings of child symptoms of psychopathology on the CBCL differed between groups of deployed military families, two parent families, and single parent families. Resulted indicated that when the paths in the overall model were allowed to freely vary, the estimates provided a good fit to the data, $X^2(37) = 81.50$, CFI = .98. RMSEA = .035. Constraining the path from maternal emotional health to child symptoms of psychopathology led to a worse fitting model, X^2 difference = 5.92, df = 2, $p < .05$. In contrast, constraining paths from parenting stress to child symptoms of psychopathology did not lead to a worse fitting model, X^2 difference = 2.91, df = 2, p = .23. These findings indicate that the path from maternal emotional health to child symptoms of psychopathology differs by group; however, there is no difference by group for the association between parenting stress and child symptoms of

psychopathology. As show in Figure 1, the link between maternal emotional health and child symptoms of psychopathology is stronger for military families than either two or single parent families. Follow up analyses to see if modeled paths differed by gender demonstrated that there were no significant differences.

Additional follow up analyses were next used to examine whether the effect of maternal emotional health on child symptoms of psychopathology differed for internalizing vs externalizing symptoms. Parenting stress was left in the model. As seen in Figure 2, again the overall fit of the model was excellent, X^2 (20) = 23.88, CFI = .998. RMSEA = .014. The models constraining each of the paths to be equal led to a worse fitting model, X^2 difference = 8.88, df = 2, $p < .01$ for the path from maternal emotional health to child internalizing symptoms but no significant difference in fit for the path from maternal emotional health to child externalizing symptoms, X^2 difference = 1.63, df = 2, p = 44 emerged. These findings suggest that the overall pattern of effects observed above was likely driven by the link between maternal emotional health and children's internalizing symptoms.

Next, SEM was used to examine the associations between maternal emotional health and parenting stress with children's symptoms of psychopathology and achievement of developmental milestones during the preschool and early school age years. A model for preschool age children and a model for school age children were tested separately given the differences in salient developmental skills that are being modeled at each stage. For the preschool children, a latent construct was created to reflect their achievement of emotion regulation, effortful control, and social skills. This measurement model was an excellent fit to the data, $X^2(26) = 54.45$, CFI = 1.00, RMSEA = .00. In addition, a good fitting structural model was achieved, $X^2(26) = 68.28$, CFI = .96, RMSEA = .076. As seen in Figure 3, whereas maternal emotional health was a significant predictor of both children's psychological symptoms ($R^2 = .44$) and developmental skills achievement ($R^2 = .29$), mother's parenting stress was not associated with either child outcome. For the early school age children, a latent construct was again created to reflect children's ability to navigate their social worlds. Peer acceptance, popularity, and friendship quality were modeled, $X^2(21) = 46.50$, $p < .001$, CFI = .96, RMSEA = .064. In addition, parent ratings of school achievement were used as a measured indicator. Again, the overall model was well fitting, $X^2(21) = 46.50$, $p < .001$, CFI = .96, RMSEA = .064. However, maternal emotional health was only associated with children's symptoms of psychopathology ($R^2 = .31$). Maternal emotional health was not predictive of any developmental indicators nor was maternal parenting distress associated with any child outcomes (see Figure 2).

Characteristics of the military family and their experiences with deployment were then examined as a means for understanding both the impact of deployment on children and the mechanisms by which this influence may occur. Specifically, maternal perceptions of deployment danger, total months of deployment during the child's lifetime, Service Member rank, and family's residence on or off post were correlated with deployment outcomes. No significant correlations were found between any of these military characteristics and indicators of either maternal or child outcomes (See Table 3).

Next, the PROCESS macro was used to test whether military rank was indirectly related to child symptoms of psychopathology or deployment response via associations with maternal emotional distress (See Figure 4 for heuristic model). Recent guidelines have indicated that, unlike prior mediation recommendations, a direct effect between an independent and dependent variable is not needed to examine an indirect effect (Preacher, Rucker, & Hayes, 2007). Therefore, the indirect effect of rank was examined on each of the child outcomes, even though correlation analyses indicated that there was not a direct

effect. As seen in Table 4, as expected, direct effects for rank were non-significant; however, both the indirect effect of rank on children's symptoms of psychopathology via mothers negative emotionality was significant (b = -.13, Sobel test z = 3.89, p < .001) and children's response to deployment via mothers negative emotionality was significant (b = -.12, Sobel test z = 3.87, p < .05). These findings indicate that families of enlisted Service Members are more likely to have children with symptoms of psychopathology and deployment distress via increases in maternal emotional distress.

Similar analyses were repeated in order to examine whether families' living arrangement on or off base was indirectly related to child symptoms of psychopathology or deployment response via associations with maternal emotional distress. Again as seen in Table 4, as anticipated, families' living arrangements had no direct association with child outcomes whereas their living arrangements were indirectly associated with both child symptoms of psychopathology and response to deployment via maternal emotional distress (b = -.07, Sobel test z = 2.13, p < .05; and b = -.06, Sobl test z = 2.20, p < .05 respectively). As such, living off base appears to increase risk for child psychopathology and poor deployment coping via its effect on maternal emotional distress.

Finally, a series of analyses were conducted to delineate the effects of military family service usage on maternal depressive symptoms and deployment coping when risk due to pre-deployment negative life events was considered. Multiple regression analyses were undertaken to examine whether the association between pre-deployment vulnerability to negative deployment outcomes and negative deployment (i.e. maternal emotional distress and poor deployment coping) were moderated by service usage. The rank of the military family's Service Member, the family's living arrangements on or off base, and the total number of months that the Service Member had been deployed during the child's lifetime were all entered as covariates in the model. All covariates and the main effects were entered in the first step of the model, followed by the interaction term of interest in the second step. As shown in Table 5, when maternal depressive symptoms was the outcome there was a link such that negative life events was associated with higher rates of maternal depressive symptoms while the sum of services that families used was not a significant predictor. Notably, a statistically significant interaction term indicated that higher service usage moderated the association between negative life events and maternal depressive symptoms. Similarly, when the association between negative life events and maternal response to deployment was examined, higher negative life events was linked with more negative deployment response however this same main effect was not observed for service utilization. However, the link between negative life events and maternal response to deployment was again moderated by the sum of services used by families.

A test of the simple slopes and consideration of the graph of the interaction between negative life events and service utilization in the prediction of maternal depressive symptoms (See Figure 5) demonstrated that for mothers with the highest service utilization (1 SD above the mean) the association between negative life events and depressive affect is the smallest (B = 1.54, p < .001). At low service utilization (1 SD below the mean) the association between negative life events and maternal depression was the highest (B = 2.99, p < .001), whereas at mean levels of service utilization the associations between negative life events and maternal depression were more moderate (B = 2.28, p < .001).

Similar findings emerged when the simple slopes and graph were considered for the associations between negative life events and maternal response to deployment as moderated by service utilization. As seen in Figure 6, for mothers with the highest service utilization (1 SD above the mean) the association between negative life events and poor deployment response is the smallest (B = .11, p < .001). At low service utilization (1 SD below the mean) the association between negative life events and poor deployment

response was the highest (B = .19, p < .001), whereas at mean levels of service utilization the associations between negative life events and poor deployment response were more moderate (B = .15, p < .001).

Training and Professional Development Opportunities

Not applicable for this award.

RESULTS DISSEMINATION

1) We have submitted an overview of our findings as part of a military family symposium for the 2017 meeting of the Society for Research in Child and Development.

2) We are currently preparing four manuscripts for publication in peer-reviewed scientific journals.

IMPACT

- Mothers in military families endorsed more depressive symptoms than civilian mothers in either single or two parent families.

- Children in military families exhibit more internalizing and externalizing symptoms than children from either civilian age- and gender-matched single or two parent families.

- Links between maternal emotion dysregulation and depressive symptoms and child psychopathology were greater in military families than in single or two parent families. Specifically, these maternal factors were more predictive of child psychopathology in military families. We could conclude that in military families maternal emotional distress puts children ages 3-7 at particular risk for Internalizing Disorders (Depression and Anxiety). We found no gender differences.

- For military families, indicators regarding length of deployment during the child's lifetime, maternal perception of danger, Service Member rank, and living on or off base were not associated with child psychopathology or response to deployment. However, rank and base living each indirectly influenced child outcomes via effects on maternal distress such that maternal emotional distress is predictive of child psychopathology and deployment difficulties in enlisted families more so than officer's families. Similarly, living off base increases risk for child psychopathology and deployment difficulties via the effect on maternal emotional distress.

- In preschool children, maternal emotional distress was a strong predictor of child psychopathology and poor achievement of developmental milestones.

- Military spouses with histories of negative life events were at greater risk for depression and poor response to the deployment. However, these effects were buffered by service utilization. Those women might otherwise be at significant

risk but who used services demonstrated less depression and better responses to deployment.

- Important limitations of the current research include the ability to only collect one rater of child functioning and only survey data at one time point. It may well be the case that spouses of school age children experience less depression due the involvement of the school system and that child function improves with the added "rudders" of a teacher and peer group. It is also possible that parents are not particularly good raters of children's internal experiences or of behaviors that occur in settings that they do not have the opportunity to directly observe (e.g. school achievement or peer relationships within the school setting) Teacher ratings and ratings over time would be required to investigate these hypotheses. The snapsurvey software could easily be adapted to accommodate multiple time points and raters. On-line informed consent would be required of both parent and teacher in order to conduct such research.

- Based on these findings we have been awarded additional funding to continue these investigations using a multiple time point (pre-deployment, mid-deployment, post-deployment, and 6 month post-deployment follow-up) multiple reported family assessment (Service Member, Spouse, Child, and Teacher report) in order to address our study limitations.

CHANGES/PROBLEMS

Transfer delay: In 2012, the PI and co-PI switched institutions. It took 15 months for the award to be transferred due to staff illness at USAMRAA.

Recruitment: Our greatest successes with recruitment have been: a) social media recruitment with military spouses who offer paid advertisements via their various social media outlets (twitter, facebook, blog posts), and; b) using publically available demographic data to find a local school district to collect civilian families. Being able to screen potential participants prior to survey completion allowed us to yoke recruitment demographics to our existing military family data base.

PRODUCTS

Not applicable. There are no technologies or patents associated with this award.

PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS

Deane Aikins grant-funded 20% effort 2.4 months May 15, 2012 to August 31,2012, March 1, 2013 to August 2016
Julie Wargo Aikins grant-funded 15 % effort 1.8 months - May 15, 2012 to August 31,2012, March 1, 2013 to August 2016
Asya Hussain volunteer 25% effort 12 months August 2015-August 2016
Gavin Jackson grant-funded 25% effort 1.5 mos Winter 2015
Angela Jakubik volunteer 25% effort 12 months August 2015-August 2016
Adam Jakubik volunteer 25% effort 12 months August 2015-August 2016
Devin Malloy grant-funded 100% effort 12 mos June 2015-July 2016
Erika Montgomery grant-funded 25% effort 3.8 mos Spring 2015
Myung Nordin grant-funded 50% effort 6mos January 2015-June 2015

Mary O'Neil volunteer 25% effort 12 months August 2015-August 2016
Emma Rogers volunteer 25% effort 12 months August 2015-August 2016
Niani White volunteer 25% effort 12 months August 2015-August 2016

CONCLUSION

With this award, we sought to identify developmental factors that were specific to military families in addition to factors related to combat-exposure intense deployments. Even with the study limitations as enumerated above, the present work adds to the growing literature detailing the increased psychological impact of deployment stress on spouses and children ages 3-7 and highlights possible military-specific mechanisms for the relation between maternal parent and child factors. Optimistically, we also provide evidence for the benefits of spouse engagement in family readiness services. Our current and future work examining these factors from a multi-modal longitudinal design that captures the report of multiple family members and reporters will significantly add to this work.

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Table 1A: Study Demographics: Preschool Age (3-5)

	High Perceive Risk	Low Perceive Risk	Dual Parent	Single Parent
Sample size	200/200	100/100	100/100	100/100
Parent ages (Spouse/SM)	31/30	30/30	33/33	34/36
Needs-to-income ratio	1.11	1.00	1.19	0.90
# Deployments	1.95	1.74	n/a	n/a
Child race (% Caucasian)	79.3%	78.9%	76.7%	71.4%
Age first dep. (in months)	9.12	10.72	n/a	n/a
Total # months separated	14.98	12.10	n/a	32.66

Table 1B Study Demographics: School Age (5-7)

	High Perceive Risk	Low Perceive Risk	Dual Parent	Single Parent
Sample size	200/200	100/100	100/100	100/100
Parent ages (Spouse/SM)	32/33	31/33	34/36	35/36
Needs-to-income ratio	1.20	1.17	1.15	0.90
# Deployments	2.3	2.4	n/a	n/a
Child race (% Caucasian)	74.2%	78%	75.5%	72.6%
Age first dep. (in months)	17.89	23.41	n/a	n/a
Total # months separated	19.68	18.95	n/a	50.92

Table 2. ANOVA examining mean level differences in maternal emotional distress and parenting distress and child psychopathology between military and two and single parent civilian families.

Variables		*M* (SD)	*SE*	*F* statistic
Maternal Depressive Symptoms				
	Military[a]	17.95 (11.96)[bc]	.49	29.21***
	Two parent[b]	11.06 (8.88)[ac]	.63	
	Single parent[c]	15.37 (10.87)[ab]	.75	
Maternal Emotion Regulation				
	Military	3.00 (5.14)[b]	.02	5.84***
	Two parent	3.13 (.52)[a]	.37	
	Single parent	3.07 (.46)	.03	
Parenting Distress				
	Military	26.77 (9.75)[b]	.40	6.59***
	Two parent	24.38 (9.06)[ac]	.64	
	Single parent	27.66 (9.34)[b]	.65	
Child Internalizing Symptoms				
	Military	53.06 (11.62)[bc]	.48	22.84***
	Two parent	47.77 (10.44)[ac]	.71	
	Single parent	49.68 (9.88)[ab]	.37	
Child Externalizing Symptoms				
	Military	57.47 (11.56)[bc]	.48	8.79***
	Two parent	47.77 (10.44)[ac]	.74	
	Single parent	49.68 (9.88)[ab]	.69	

Note: * $p < .001$

Table 3: Correlations between military family characteristics and parent and child outcomes.

	Parent and Child Outcomes		
	Maternal Emotional Health	Child Sxs of Psychopathology	Child Response to Deployment
Military characteristics			
Maternal perception of deployment danger	.06	-.03	.05
Total months deployed during child's lifetime	.04	.02	.00
Military rank	-.20***	-.09	-.09
Off base v. On base	-.09*	-.05	-.04

Table 4: Direct and Indirect Effects between Military Demographics and Child Outcomes.

	Total Effects	Direct Effects	Indirect Effects via Maternal Emotional Distress
Rank ✎ Children's Emotional Sxs	-.08[T]	.05	-.13*
Rank ✎ Children's Deployment Response	-.09*	.03	-.12*
On base v. Off base ✎ Children's Emotional Sxs	-.05	.02	-.07*
On base v. Off base ✎ Children's Deployment Response	-.06	.03	-.06*

*= p<.05

Table 5: The effects of military family service usage on maternal depressive symptoms and deployment coping when risk due to pre-deployment negative life events was considered.

	Maternal Depression		Maternal Deployment Response	
Predictors:	B (SE)		B (SE)	
Living arrangements	-2.81(.97)*		-.12(.06)	
Military rank	-5.15 (1.14)*		-.07(.07)	
Length of deployment over the child's lifetime	.02 (.05)		.00 (.00)	
Negative life events	2.28 (.28)*		.15 (.04)	
Service utilization	.18 (.30)		.02 (.01)	
		R^2 = .18***		R^2 = .18***
Negative life events x Service utilization	-.45 (.16)		-.02(.01)	
		$R^2\Delta$ = .015*		$R^2\Delta$ = .015*

Table 1A: Study Demographics: Preschool Age (3-5)

	High Perceive Risk	Low Perceive Risk	Dual Parent	Single Parent
Sample size	200/200	100/100	100/100	100/100
Parent ages (Spouse/SM)	31/30	30/30	33/33	34/36
Needs-to-income ratio	1.11	1.00	1.19	0.90
# Deployments	1.95	1.74	n/a	n/a
Child race (% Caucasian)	79.3%	78.9%	76.7%	71.4%
Age first dep. (in months)	9.12	10.72	n/a	n/a
Total # months separated	14.98	12.10	n/a	32.66

Table 1B Study Demographics: School Age (5-7)

	High Perceive Risk	Low Perceive Risk	Dual Parent	Single Parent
Sample size	200/200	100/100	100/100	100/100
Parent ages (Spouse/SM)	32/33	31/33	34/36	35/36
Needs-to-income ratio	1.20	1.17	1.15	0.90
# Deployments	2.3	2.4	n/a	n/a
Child race (% Caucasian)	74.2%	78%	75.5%	72.6%
Age first dep. (in months)	17.89	23.41	n/a	n/a
Total # months separated	19.68	18.95	n/a	50.92

Table 2. ANOVA examining mean level differences in maternal emotional distress and parenting distress and child psychopathology between military and two and single parent civilian families.

Variables		*M* (SD)	*SE*	*F* statistic
Maternal Depressive Symptoms				
	Military[a]	17.95 (11.96)[bc]	.49	29.21***
	Two parent[b]	11.06 (8.88)[ac]	.63	
	Single parent[c]	15.37 (10.87)[ab]	.75	
Maternal Emotion Regulation				
	Military	3.00 (5.14)[b]	.02	5.84***
	Two parent	3.13 (.52)[a]	.37	
	Single parent	3.07 (.46)	.03	
Parenting Distress				
	Military	26.77 (9.75)[b]	.40	6.59***
	Two parent	24.38 (9.06)[ac]	.64	
	Single parent	27.66 (9.34)[b]	.65	
Child Internalizing Symptoms				
	Military	53.06 (11.62)[bc]	.48	22.84***
	Two parent	47.77 (10.44)[ac]	.71	
	Single parent	49.68 (9.88)[ab]	.37	
Child Externalizing Symptoms				
	Military	57.47 (11.56)[bc]	.48	8.79***
	Two parent	47.77 (10.44)[ac]	.74	
	Single parent	49.68 (9.88)[ab]	.69	

Note: * $p < .001$

Table 3: Correlations between military family characteristics and parent and child outcomes.

	Parent and Child Outcomes		
	Maternal Emotional Health	Child Sxs of Psychopathology	Child Response to Deployment
Military characteristics			
Maternal perception of deployment danger	.06	-.03	.05
Total months deployed during child's lifetime	.04	.02	.00
Military rank	-.20***	-.09	-.09
Off base v. On base	-.09*	-.05	-.04

Table 4: Direct and Indirect Effects between Military Demographics and Child Outcomes.

	Total Effects	Direct Effects	Indirect Effects via Maternal Emotional Distress
Rank ✎ Children's Emotional Sxs	-.08[T]	.05	-.13*
Rank ✎ Children's Deployment Response	-.09*	.03	-.12*
On base v. Off base ✎ Children's Emotional Sxs	-.05	.02	-.07*
On base v. Off base ✎ Children's Deployment Response	-.06	.03	-.06*

*= p<.05

Table 5: The effects of military family service usage on maternal depressive symptoms and deployment coping when risk due to pre-deployment negative life events was considered.

	Maternal Depression		Maternal Deployment Response	
Predictors:	B (SE)		B (SE)	
Living arrangements	-2.81(.97)*		-.12(.06)	
Military rank	-5.15 (1.14)*		-.07(.07)	
Length of deployment over the child's lifetime	.02 (.05)		.00 (.00)	
Negative life events	2.28 (.28)*		.15 (.04)	
Service utilization	.18 (.30)		.02 (.01)	
		R^2 = .18***		R^2 = .18***
Negative life events x Service utilization	-.45 (.16)		-.02(.01)	
		$R^2\Delta$ = .015*		$R^2\Delta$ = .015*